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Nota di contenuto Stirring; Contents; Preface; Symbols; 1 Stirring, general; 1.1 Stirring

operations; 1.2 Mixing equipment; 1.2.1 Mixing tanks and their fittings; 1.2.2 Stirrer types and their operating characteristics; 1.2.3 Nozzles and spargers; 1.2.4 Sealing of stirrer shafts; 1.3 Mechanical stress; 1.3.1 Stress on baffles; 1.3.2 Stress on stirrer heads; 1.3.3 Tank vibrations; 1.3.4 Wear of stirrer heads; 1.3.5 Shear stress on the particulate material beinig mixed; 1.4 Flow and Turbulence; 1.4.1 Introduction; 1.4.2 Statistical theory of turbulence; 1.4.2.1 Description

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Sommario/riassunto

Stirring is one of the most important operations in process technology. No chemical exists that has non been submitted to a mixing process during its synthesis. Furthermore, stirring is important for the pharmaceutical and food industries, too. The most important mixing operations are applied to homogenize miscible liquids, to intensify the heat transfer between a liquid and the heat exchanger, and to perform mass transfer in multiphase systems, to whirl up solid particles in fluids and to disperse immiscible liquids. This book discusses in detail the above listed operations, tak